

Abstract

A video imaging system includes an imaging array having a plurality of picture elements (pixels) formed in a substrate. An analog to digital converter formed in the substrate converts signals from the pixels into digital pixel signals. A defect detection circuit formed in said substrate provides a defective pixel output signal indicating, as the digital pixel signal corresponding to the pixels is processed, if any one pixel of the plurality of pixels in the imaging array is defective. The video imaging system includes a defect substitution circuit, also formed in the substrate, that substitutes a corrected pixel for any defective pixel.

The video imaging system is responsive to a gain control signal to adjust the pixels in magnitude. The gain control signal is applied to the first circuit to control the analysis of the pixel to determine if it is defective.

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